

AMENDMENTS TO THE CLAIMS

Please amend the claims so that they read as follows:

1. (Currently Amended) A transmucosally delivered controlled release composition which upon administration exhibits substantially linear absorption rates, the composition comprising:

- (a) an analgesically effective amount of morphine ~~base monohydrate~~;
- (b) a controlled release chitosan polymer in an amount effective to provide substantially linear absorption rates upon administration; and optionally comprising:
 - (c) one or more antimicrobial agents;
 - (d) one or more antioxidants; and
 - (e) water;

wherein the molecule to molecule ratio of morphine ~~base monohydrate~~ to the controlled release chitosan polymer ranges from about 1:1 to about 100,000:1, and the weight ratio of morphine:chitosan ranges from about 5:1 to about 15:1 to provide the substantially linear absorption rates upon administration.

2. (Currently Amended) The composition of claim 1, wherein the molecule to molecule ratio of the morphine ~~base monohydrate~~ to the controlled release chitosan polymer ranges from about 5,000:1 to about 80,000:1.

3. (Canceled)

4. (Currently Amended) The composition of claim 1, wherein the concentration of morphine ~~base monohydrate~~ is from about 18.75 mg/ml to about 300 mg/ml.

5. (Currently Amended) The composition of claim 1, wherein the concentration of morphine ~~base monohydrate~~ is from about 37.5 mg/ml to about 150 mg/ml.

6. (Currently Amended) The composition of claim 1, wherein the morphine ~~base monohydrate~~ is purified morphine ~~base monohydrate~~.

7. (Original) The composition of claim 1, wherein the concentration of the chitosan polymer is from about 2 mg/ml to about 7 mg/ml.

8. (Original) The composition of claim 1, wherein the concentration of the chitosan polymer is from about 4 mg/ml to about 6 mg/ml.

9. (Original) The composition of claim 1 wherein the antioxidant is selected from the group consisting of methane sulfonic acid, citric acid, sodium citrate, ascorbic acid, and sodium ascorbate.

10. (Currently Amended) The composition of claim 9, wherein the antioxidants are selected from the group consisting of citric acid and sodium citrate, and the total amount of antioxidant is present in a range from about 20 to about 50% by weight/volume of the composition.

11. (Currently Amended) The composition of claim 9, wherein the antioxidants are selected from the group consisting of ascorbic acid and sodium ascorbate, and the total amount of antioxidant is present in a range from about 40 to about 70% by weight/volume of the composition.

12. (Original) The composition of claim 9, wherein the antioxidant is methane sulfonic acid, and the amount of antioxidant is present in a range from about 10 to about 60% by weight/volume of the composition.

13. (Original) The composition of claim 1, wherein the antimicrobial agent is selected from the group consisting of benzalkonium chloride, disodium EDTA, sodium benzoate, and combinations thereof.

14. (Previously Presented) The composition of claim 12, comprising an antimicrobial agent at a concentration of from about 0.0005% to about 0.5% by weight/volume of the composition.

15. (Previously Presented) The composition of claim 1, wherein the concentration of antimicrobial agent is from about 0.005% to about 0.5% by weight/volume of the composition.

16. (Original) The composition of claim 1, wherein the transmucosal delivery is selected from the group consisting of nasal, buccal, rectal, vaginal, and ocular modes of administration.

17. (Original) The composition of claim 1, wherein the transmucosal delivery is by nasal administration.

18. (Withdrawn) The composition of claim 1, wherein the composition is prepared under nitrogen gas by

- (a) mixing the morphine and acid, polymer, and antimicrobial agents, wherein each ingredient is mixed into the solution for at least 5 minutes;
- (b) adding the antioxidants, wherein the pH is from about 3.0 to about 5.0;
- (c) adjusting the final batch volume with water to form a final solution; and
- (d) filtering the solution with a pre-sterilized micron filter.

19. (Withdrawn) The composition of claim 18, wherein the pre-sterilized micron filter is about a 0.2 micron filter.

20. (Currently Amended) The composition of claim 1, wherein the composition yields about 18.75 to about 300 microgram of morphine ~~base-monohydrate~~ per 100 microliter nasal spray.

21. (Currently Amended) A method of administering a controlled release morphine medicament which upon administration exhibits substantially linear absorption rates, wherein the medicament is administered transmucosally to a subject in need thereof, said medicament comprising:

- (a) an analgesically effective amount of morphine ~~base monohydrate~~;
- (b) a controlled release chitosan polymer in an amount effective to provide substantially linear absorption rates upon administration; and optionally comprising:
 - (c) one or more antimicrobial agents;
 - (d) one or more antioxidants; and
 - (e) water

wherein the molecule to molecule ratio of morphine ~~base monohydrate~~ to the controlled release chitosan polymer ranges from about 1:1 to about 100,000:1, and the weight ratio of morphine:chitosan ranges from about 5:1 to about 15:1 to provide the substantially linear absorption rates upon administration.

22. (Currently Amended) The method of claim 21, wherein the morphine ~~base monohydrate~~ is purified morphine ~~base monohydrate~~.

23. (Original) The method of claim 21, wherein the subject is human.

24. (New) The transmucosally delivered controlled release composition of claim 1, wherein the weight ratio of morphine:chitosan is about 7.5:1.

25. (New) The transmucosally delivered controlled release composition of claim 1, wherein the weight ratio of morphine:chitosan is about 15:1.

26. (New) A transmucosally delivered controlled release composition which upon administration exhibits substantially linear absorption rates, the composition comprising:

- (a) an analgesically effective amount of morphine;
- (b) a controlled release chitosan polymer in an amount effective to provide substantially linear absorption rates upon administration; and optionally comprising:
 - (c) one or more antimicrobial agents;
 - (d) one or more antioxidants; and
 - (e) water;

wherein the molecule to molecule ratio of morphine to the controlled release chitosan polymer ranges from about 1:1 to about 23,000:1 to provide the substantially linear absorption rates upon administration.

27. (New) The transmucosally delivered controlled release composition of claim 26, wherein the molecule to molecule ratio of morphine to the controlled release chitosan polymer is about 11,500:1.

28. (New) The transmucosally delivered controlled release composition of claim 26, wherein the molecule to molecule ratio of morphine to the controlled release chitosan polymer is about 23,000:1.

29. (New) The transmucosally delivered controlled release composition of claim 26, wherein the pH is from about 3.0 to about 7.0.

30. (New) The transmucosally delivered controlled release composition of claim 29, wherein the pH is from about 4.0 to about 5.0.

31. (New) The transmucosally delivered controlled release composition of claim 1, wherein the pH is from about 3.0 to about 7.0.

32. (New) The transmucosally delivered controlled release composition of claim 1, wherein the pH is from about 4.0 to about 5.0.

33. (New) The transmucosally delivered controlled release composition of claim 1, wherein the morphine is morphine mesylate.

34. (New) The transmucosally delivered controlled release composition of claim 1, wherein the controlled release chitosan polymer is chitosan.

35. (New) The transmucosally delivered controlled release composition of claim 26, wherein the morphine is morphine mesylate.

36. (New) The transmucosally delivered controlled release composition of claim 26, wherein the controlled release chitosan polymer is chitosan.